

STAT

Approved For Release 2005/05/20 : CIA-RDP78B04770A001600010005-0

Proj 497113
23 Mar 65
RFD

November 9, 1964

Dear George:

I have asked our engineers to compile the cumulative changes to the Design Specification (dated 16 December 1963) for Printer No. 2. These represent the understandings and clarifications arrived at during the various design reviews of this program.

Since these will be incorporated into our Feasibility Report and hence will become binding on the design configuration of the printer, I would appreciate your review of these changes in advance of our meeting on 23 November so that we can confirm them at that time.

If you are in disagreement with this list, please call me at your convenience.

We are planning to spend most the 23 November reviewing program status. I have indicated my interest in developing a printer breadboard here, and I believe the program is moving in that direction. I will be in a better position to evaluate the potential of CRT exposure after my review on Wednesday.

If I don't hear from you in the meantime, I'll see you for breakfast on the 23rd. Your reservations have been set at Midtown Tower.

Very truly yours,

[Redacted Signature]

Associate Director
Exploration Development
Engineering

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DSC/mc

Declass Review by NGA.

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REVISIONS TO SPECIFICATION

Reference: Performance Requirements for High Revolution Step and Repeat Contact Printer, dated 16 December, 1963

The following revisions are the result of changes and clarifications of the referenced specification agreed to in discussions with the Technical Monitor:

- Paragraph 2.1 Delete first sentence and substitute the following:
"General. The automatic step and repeat contact printer specified herein shall be an electrically operated, single-unit, enclosed, darkroom loading, daylight operating floor model requiring no installation other than connection to an electric power source and to an external exhaust vent."
- Paragraph 2.1.1 Eliminate the last sentence:
"A secondary.....transparencies."
- Paragraph 2.1.3 In the first sentence, change the word "removable" to "permanent". After the last sentence, add the following:
"Each printable frame will be uniquely identified by an appropriate code which will be preferably human readable as well as machine readable."
- Paragraph 2.3.2 Delete and substitute the following:
"Interior Environment: Input air maintained at $70^{\circ} \pm 2^{\circ}$ and $50\% \pm 5\%$ R. H. shall be taken from the clean room facility, and exhaust shall be vented external to the clean room. Input air shall be filtered to a particle size not greater than 0.3 micron in diameter."
- Paragraph 2.4.5 Add the following:
"If MIL Standard spools do not exist, standard commercially available spools will be used."

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Paragraph 2.4.6 Delete entire paragraph.

Paragraph 2.4.7

Add the following:

"Perforated film will not be used.
Duplication film will be orthochromatic only. No panchromatic films will be used."

Paragraph 2.5

Add the following:

"Masks along the width of the film may be eliminated in order to assure the printing of all data on the film."

Paragraph 2.6

Delete and substitute the following:

"The print rate shall be no less than 10 frames per minute, and the specified requirements for maximum quality shall be maintained. For purposes of demonstrating printing rate, a minimum output density of 0.05 above base fog shall be produced on 5427 duplicating film, (processing in accordance with manufacturer's recommendations), using a uniform input density of 2.5. Resolution may be demonstrated separately on any chosen film."

Paragraph 2.7

Delete entire paragraph and replace with the following:

"Evenness of illumination"

Evenness of illumination shall be such that the illuminance at the film gate shall not vary across the film width by more than 5%. Measurement of evenness of illumination may be made photometrically."

Paragraph 2.8

Eliminate the last sentence and add the following:

"In the event that original targets of 800 lpm of 1000:1 contrast ratio are not available, it will be sufficient if 400 lpm can be demonstrated with any input target of over 400 lpm. Visual determination by microscope will be used."

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Paragraph 2.14 Add the following:

"at any place in the format, excluding distortion introduced by processing."

Paragraph 2.15

Delete, and add the following:

"Film Cleaning

Provision shall be made for vacuum cleaning of the unexposed film before it enters the print platen. The negative film will be furnished precleaned and will require no further cleaning."

Paragraph 2.22.1

Eliminate the words...."and color temperature." and replace with....
"or equivalent."

Paragraph 2.22.3

Change sentence to read:

"Provision shall be made for bi-directional winding of the negative material at speeds up to 100 fpm or within a reasonable time."

Paragraph 2.25

Add the following:

"Machine Size Printer should be limited in size to 5' x 7' x 2.5' if at all possible."

Paragraph 2.26

Add the following:

"Briefing Board

Briefing boards or artists concepts of the printer in color on 20" x 24" mattes will be furnished. These will show 2 views of the printer, both open and closed, and will set forth the prime design objectives."